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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,726	11/12/2003	Peter Streuer	054821-0877	7254

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EXAMINER

LEWIS, BEN

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,726

Applicant(s)

STREUER, PETER

Examiner

Ben Lewis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/14/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,2,4-10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 14th, 2006 has been entered. Claims 1 and 8 have been amended. Claims 3 and 11 have been cancelled.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al (U.S. Patent No. 6,277,517 B1).

With respect to claims 1, 2 and 10, Thomas et al discloses a battery of the type having electrolyte therein, comprising a case defining at least one electrolyte containing cell, and a primary cover bonded to the case. The primary cover has a barrel extending into the electrolyte cell. A secondary cover bonded to the primary cover top, and an aperture concentric with the primary cover barrel. A baffling plug is disposed in the secondary cover aperture and extends into the barrel (Col 2 lines 60-67); (Col 3 lines 1-4). Thomas et al further teach that in FIGS. 3 and 6, baffling plug **90** is pressed into the fill hole **80** formed in the secondary cover **40** to inhibit the escape of the electrolyte from the cells. Each baffling plug **90** has a lid **94** with a bottom **96**, a pair of tubular splash guards **42**, **43** extending from the lid bottom **96**, and a retaining member **88** for retaining the plug **90** in the fill hole **80**. The splash guards include a coaxially arranged outer tubular splash guard **42** and inner tubular splash guard **43**. When the plug **90** is pressed into the fill hole **80** the splash guards **42**, **43** extend into the barrels **22** of the primary cover **20**. In the preferred embodiment, the retaining member **88** is formed as an integral part of the outer splash guard **42** (Col 7 lines 6-18). The outer tubular splash guards **42a-f** have slots **44a-f** formed through their surfaces. Explosive gases evolved in the cells escape through these slots **44a-f**. The preferred embodiment has four slots for each outer tubular splash guard **42**. The slots are formed symmetrically and extend from the lower tip toward the retaining member **88** (Col 7 lines 44-50). Each inner tubular splash guard **43** is aligned coaxially with a respective outer tubular splash guard **42** and defines an inner chamber **45** at its center (Col 7 lines 51-57).

With respect to slots which form return paths for electrolyte from the degassing system, Thomas et al. teach that the outer tubular splash guards **42a-f** have slots **44a-f** formed through their surfaces. Explosive gases evolved in the cells escape through these slots **44a-f**. The preferred embodiment has four slots for each outer tubular splash guard **42**. The slots are formed symmetrically and extend from the lower tip toward the retaining member **88** (Col 7 lines 44-50).

With respect to claim 2, Thomas et al teach that each inner tubular splash guard **43** is aligned coaxially with a respective outer tubular splash guard **42** and defines an inner chamber **45** at its center. The only opening into the inner chamber **45** is through its bottom opening, so any evolved gases and electrolyte driven into the inner chamber **45** are returned to the cells through the bottom opening of the inner chamber **45** (Col 7 lines 51-57).

With respect to claim 10, Thomas et al teach that each plug **90a-f** is retained in the respective fill hole **80a-f** by the respective retaining member **88a-f**. In the preferred embodiment, the retaining member **88** is a wedge-shaped flange surrounding the annular base **92** having an angled surface **106** extending from the base bottom **96** outwardly toward the base top **94**, and an orthogonal surface **88** extending radially away from the base **88**. Forcing the plug **90** into the fill hole **80** compresses the retaining member **88** against the retention member inner wall **84** to create an interference press fit which seals the fill hole **80** and retains the plug **90** therein.

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 4, 8, 9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Richter et al. (U.S. Patent No. 6,733,921 B2).

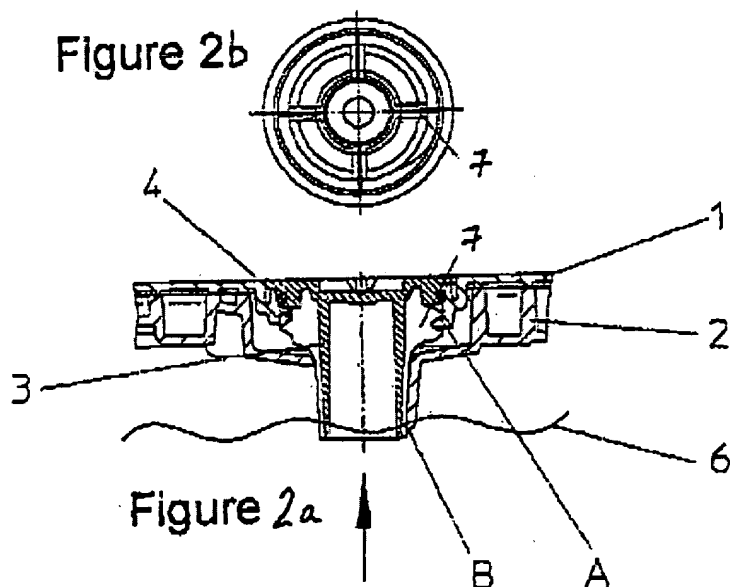
With respect to claims 8 and 9, Richter et al. disclose a rechargeable electric battery (title) wherein a rechargeable electric battery including a plate block arranged in a plastic block box, positive and negative electrodes located in the box and electrically isolated by separators and conductively connected by sulfuric acid electrolyte, a cover for the box which has closure plugs and/or acid state indicators fitted in a gas-tight manner to openings therein, wherein at least a portion of an inner surface of the battery is electrically conductive or is provided with an electrically conductive layer, beginning in an area of a sealing seat of the closure plug or of the acid state indicator, and is electrically conductively connected to the electrolyte (Col 2 lines 35-47). Richter et al. also teach that the electrical connection between closure plug and acid is provided by immersing the lower part of the plug into the electrolyte or via parts of the rechargeable battery which provide an electrical connection to the acid, or via an active capillary wick which effects the connection to the electrolyte (Col 4 lines 10-20).

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With respect to slots distributed over the circumference of a cavity, Richter et al teach that the closure plug is provided with a capillary gap 7 "slots" (Col 4 lines 35 to 45).

With respect to the sealing plug formed from electrically conductive plastic, Richter et al. teach that the plug can be composed of, for example, corrosion resistant metal, conductive plastic, carbon (graphite, pyrolytic carbon), plastic doped with carbon powder or carbon fibers or conductive ceramic material (Col 3 lines 60-67).

In addition to closure plugs, in the connection according to the invention, closure plugs which contain acid indicators (acid level and/or acid density) are also to be understood, as are acid state indicators, which are screwed or pressed into openings in the cover of the rechargeable battery in addition to closure plugs (Col 3 lines 31-40).



Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al (U.S. Patent No. 6,277,517 B1) in view of Spaziant et al. (U.S. Patent No. 4,201,647).

With respect to claims 4 and 12, Thomas et al disclose a battery of the type having electrolyte therein, comprising a case defining at least one electrolyte containing cell, and a primary cover bonded to the case. The primary cover has a barrel extending into the electrolyte cell. A secondary cover bonded to the primary cover top, and an aperture concentric with the primary cover barrel. A baffling plug is disposed in the secondary cover aperture and extends into the barrel (Col 2 lines 60-67); (Col 3 lines 1-4). Thomas et al further teach that in FIGS. 3 and 6, baffling plug **90** is pressed into the fill hole **80** formed in the secondary cover **40** to inhibit the escape of the electrolyte from the cells. Each baffling plug **90** has a lid **94** with a bottom **96**, a pair of tubular splash guards **42**, **43** extending from the lid bottom **96**, and a retaining member **88** for retaining

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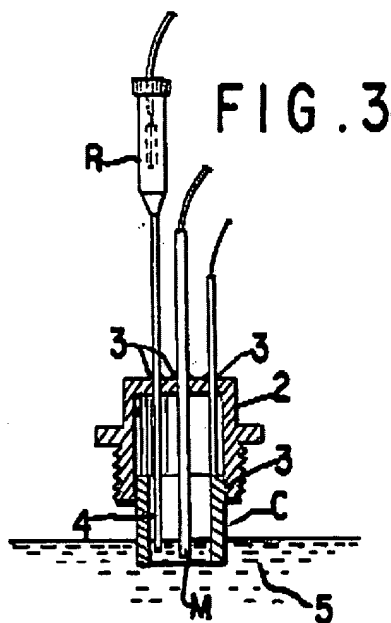
the plug **90** in the fill hole **80**. The splash guards include a coaxially arranged outer tubular splash guard **42** and inner tubular splash guard **43**. When the plug **90** is pressed into the fill hole **80** the splash guards **42**, **43** extend into the barrels **22** of the primary cover **20**. In the preferred embodiment, the retaining member **88** is formed as an integral part of the outer splash guard **42** (Col 7 lines 6-18). The outer tubular splash guards **42a-f** have slots **44a-f** formed through their surfaces. Explosive gases evolved in the cells escape through these slots **44a-f**. The preferred embodiment has four slots for each outer tubular splash guard **42**. The slots are formed symmetrically and extend from the lower tip toward the retaining member **88** (Col 7 lines 44-50). Each inner tubular splash guard **43** is aligned coaxially with a respective outer tubular splash guard **42** and defines an inner chamber **45** at its center (Col 7 lines 51-57). Thomas does not disclose at least one of as state of charge indicator and acid level indicator attached to the upper part of the sealing plug and passing through the lower part of the sealing plug cavity.

However, Spaziante et al. discloses measuring electrodes and process (title) wherein, considering the discharging voltage characteristics of a lead battery, it is evident that the voltage determination cannot give a reliable indication of the charge condition of the battery since even near full discharge the voltage is almost the same as that of a fully charged battery. A reliable method to assess the charge condition is to measure the acid concentration (Col 2 lines 4-20). Spaziante et al also teach that in FIG. 3, the assembly is comprised of a measuring electrode M, a counter-electrode C for activating the measuring electrode M by anodic polarization of the same in an acidic

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or basic solution and a reference electrode R (Col 6 lines 5-16). The measuring assembly constituted by the three electrodes placed in the electrolyte of the battery is moreover useful in detecting and eventually signaling the lowering of the level of the electrolyte below the recommended minimum (Col 9 lines 45-65) (See Fig. 3).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the battery level/charge indicator of Spaziante et al into the battery plug of Thomas et al. because Spaziante et al teach that the measuring assembly constituted by the three electrodes placed in the electrolyte of the battery is moreover useful in detecting and eventually signaling the lowering of the level of the electrolyte below the recommended minimum (Col 9 lines 45-65).



With respect to claim 5, Thomas et al teaches that the present invention provides a battery of the type having electrolyte therein, comprising a case defining at least one electrolyte containing cell, and a primary cover bonded to the case. The primary cover has a barrel extending into the electrolyte cell. A secondary cover bonded to the primary cover top, and an aperture concentric with the primary cover barrel. A baffling plug is disposed in the secondary cover aperture and extends into the barrel (Col 2 lines 60-67); (Col 3 lines 1-4). Thomas et al also teach that the outer tubular splash guards **42a-f** "splash basket" have slots **44a-f** formed through their surfaces. Explosive gases evolved in the cells escape through these slots **44a-f**. The preferred embodiment has four slots for each outer tubular splash guard **42**. The slots are formed symmetrically and extend from the lower tip toward the retaining member **88** (Col 7 lines 44-50). The instant specification recites that the splash basket preferably likewise has a roughened surface (Paragraph 0019). Thomas et al is silent as to the roughness of the splash guards. However, it is the position of the examiner that such properties are inherent, given that the materials of construction of the plug of Thomas et al. have an inherent roughness. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. In re Robertson, 49 USPQ2d 1949 (1999).

With respect to claims 6 and 7, Thomas et al as modified by Spaziant et al. disclose measuring electrodes and process (title) wherein, considering the discharging voltage characteristics of a lead battery, it is evident that the voltage determination

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cannot give a reliable indication of the charge condition of the battery since even near full discharge the voltage is almost the same as that of a fully charged battery. A reliable method to assess the charge condition is to measure the acid concentration (Col 2 lines 4-20). The instant specification recites the state of charge indicator and/or electrolyte level indicator may also have a roughened surface (Paragraph 0019).

Thomas et al and Spaziante et al are silent as to the roughness of the charge indicator and/or electrolyte level indicator. However, it is the position of the examiner that such properties are inherent, given that the materials of construction of the charge indicator and/or electrolyte level indicator of Thomas et al. and Spaziante et al have an inherent roughness. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. In re Robertson, 49 USPQ2d 1949 (1999).

Response to Arguments

7. Applicant's arguments filed on July 14th, 2006 have been fully considered but they are not persuasive.

Applicant's principal arguments are

(a) Thomas et al. does not identically disclose a "rechargeable battery" comprising,

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among other elements, a "sealing plug" that "has an opening provided therein separate from the slots and adjacent to the openings of the degassing system and the degassing system is connected to the splash basket via the opening in the sealing plug such that the slots form return paths for the electrolyte from the degassing system" as recited in independent claim 1.

In response to Applicant's arguments, please consider the following comments.

(a) With respect to slots which form return paths for electrolyte from the degassing system, Thomas et al. teach that the outer tubular splash guards **42a-f** have slots **44a-f** formed through their surfaces. Explosive gases evolved in the cells escape through these slots **44a-f**. The preferred embodiment has four slots for each outer tubular splash guard **42**. The slots are formed symmetrically and extend from the lower tip toward the retaining member **88** (Col 7 lines 44-50).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben Lewis whose telephone number is 571-272-6481. The examiner can normally be reached on 8:30am - 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's Trainer, Susy Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


SUSY TSANG-FOSTER
PRIMARY EXAMINER

Ben Lewis

Patent Examiner
Art Unit 1745
